

Claims

[c1] **7.** A border lighting strip comprising:
an electrical cable including a plurality of electrical conductors;
a plurality of light emitting devices (LEDs) arranged alongside the electrical
cable and electrically connected thereto; and
a sheath at least partially made from a light transmissive material, said sheath
having a hollow region adapted to receive the LEDs, and an integrally formed
cylindrical lens arranged to optically cooperate with the LEDs.

[c2] **2.** The border lighting strip as set forth in claim **7**, wherein the sheath includes:
an extruded length of light transmissive material of high refractive index.

[c3] **3.** The border lighting strip as set forth in claim **7**, wherein the sheath includes:
an extruded length of a wave guiding material.

[c4] **4.** The border lighting strip as set forth in claim **7**, wherein the plurality of LEDs
are arranged such that they face the same direction.

[c5] **5.** The border lighting strip as set forth in claim **4**, wherein the cylindrical lens
is arranged parallel to the cable such that the plurality of LEDs face the
cylindrical lens.

[c6] **6.** The border lighting strip as set forth in claim **7**, wherein each LED has
associated therewith a lead frame which provides for electrical connection of the
LED to the cable.

[c7] **7.** The border lighting strip as set forth in claim **7**, further including:
a plurality of LED sockets that receive the LEDs and effectuate connection of the
LEDs to the cable.
8. The border lighting strip as set forth in claim **7**, further including:
a plurality of crimps corresponding to the plurality of LEDs which electrically
and mechanically connect the LEDs to the electrical cable.

[c8] **9.** The border lighting strip as set forth in claim **7**, wherein:
the light emitting devices (LEDs) include light emitting diodes.

[c9] 70 .The border lighting strip as set forth in claim 9 , wherein the light emitting diodes are selected from a group consisting of:
phosphide-based red light emitting diodes,
blue or blue/green nitride-based light emitting diodes, and
phosphor-coated UV light emitting diodes emitting white or other colored light.

[c10] 71 .A linear lamp comprising:
an essentially hollow tube of translucent or transparent material;
a plurality of light emitting elements arranged within the tube; and
at least one electrical wire arranged within the tube for supplying electrical power to the light emitting elements.

[c11] 72 .The linear lamp as set forth in claim 71 , wherein the tube includes:
a wave guide portion that distributes light generated by the light emitting elements along the tube.

[c12] 73 .The linear lamp as set forth in claim 71 , wherein the tube includes:
a refracting portion that spreads light generated by the light emitting elements in a plane perpendicular to the tube.

[c13] 74 .The linear lamp as set forth in claim 71 , further including:
a plurality of conductors that electrically and mechanically connect the light emitting elements to the at least one electrical wire.

[c14] 75 .The linear lamp as set forth in claim 71 , wherein:
the tube of translucent or transparent material is flexible whereby the linear lamp is flexible and arrangeable in a non-straight orientation.

[c15] 76 .A lighting strip comprising:
a cord including a plurality of parallel conductive wires and an insulating coating;
a plurality of light emitting elements affixed to the cord and arranged to receive electrical power therefrom; and
an at least partially light transmissive tube surrounding the plurality of light emitting elements and at least a portion of the cord.

[c16] 17 .The lighting strip as set forth in claim 16 , wherein the tube further includes:
an integral optical element that distributes light emitted by the plurality of light emitting elements along the lighting strip.

[c17] 18 .The lighting strip as set forth in claim 16 , wherein the tube further includes:
a lens integrally formed with the tube that optically communicates with the plurality of light emitting elements.

[c18] 19 .The lighting strip as set forth in claim 16 , wherein the light emitting elements include light emitting diodes.

[c19] 20 .The lighting strip as set forth in claim 16 , further including:
at least one mount that attaches the light emitting elements to the cord.

[c20] 21 .The lighting strip as set forth in claim 16 , wherein the tube is formed by an extrusion molding.

[c21] 22 .The lighting strip as set forth in claim 16 , wherein the tube includes a color tinting.

[c22] 23 .A method for manufacturing a lighting strip, the method comprising:
electrically connecting a plurality of light emitting devices to an electrical cable to form a linear light source;
extruding a transparent or translucent sheath adapted to receive the linear light source; and
inserting the linear light source into the extruded sheath.

[c23] 24 .The method as set forth in claim 23 , wherein the extruding includes:
extruding a cylindrical lens integrally with the extruding of the sheath.

[c24] 25 .The method as set forth in claim 23 , wherein electrically connecting includes:
attaching a mount to the electrical cable, which attaching includes an electrical connection between the mount and the cable; and
physically and electrically bonding one of the light emitting devices to the

mount.

[c25] 26. The method as set forth in claim 23, wherein electrically connecting includes:

crimping electrical leads of one of the light emitting devices to the electrical cable to establish an electrical connection therebetween; and
repeating the crimping for each of the plurality of light emitting devices.